

03/20/2017 7:04 AM

**KATHERINE SWEENEY BELL
MARION COUNTY IN RECORDER**

FEE: \$ 121.50

PAGES: 37

By: ER

Environmental Restrictive Covenant

THIS ENVIRONMENTAL RESTRICTIVE COVENANT ("Covenant") is made this 23rd day of February, 2017, by Purtee Property and Management, LLC, 6295 East 122nd Street, Carmel, Indiana, 46033.

WHEREAS: Owner is the fee owner of certain real estate in the County of Marion, Indiana, which is located at 2300 to 2306 East 44th Street, Indianapolis, Indiana, 46205 and more particularly described in the attached Exhibit A ("Real Estate"), which is hereby incorporated and made a part hereof. This Real Estate was acquired by deed on September 29, 2003 and recorded on October 3rd, 2003 as Deed Record 2003-0210648 in the Office of the Recorder of Marion County, Indiana. The Real Estate consists of approximately 0.38 acres and has also been identified by the county as parcel identification number 49-07-18-103-304.000-801. The Real Estate, to which this Covenant applies, is depicted on a map attached hereto as Exhibit B.

WHEREAS: Corrective action was implemented to address releases of hazardous substances and/or petroleum ("contaminants of concern") relating to the Real Estate. The incident numbers assigned by the Indiana Department of Environmental Management ("IDEM" or the "Department") for the releases are 2006-05-304 and 2006-06-154. A Corrective Action Plan was prepared in accordance with Indiana Code (IC) 13-25, which was approved by the Department on May 2, 2013.

WHEREAS: IDEM approved the Corrective Action Plan, which allows certain contaminants of concern to remain in the groundwater and soil, provided that certain land use restrictions are implemented and engineering controls maintained to protect human health. The remaining contaminants of concern are listed in Exhibit C, which is attached hereto and incorporated herein.

WHEREAS: The Correction Action Plan and completion report are hereby incorporated by reference and may be examined at the offices of the Department, which is located in the Indiana Government Center North building at 100 N. Senate Avenue, Indianapolis, Indiana. The documents may also be viewed electronically in the Department's Virtual File Cabinet by accessing the Department's Web Site (currently www.in.gov/idem/).

NOW THEREFORE, Purtee Property and Management, LLC subjects the Real Estate to the following restrictions and provisions, which shall be binding on the current Owner and all future Owners:

I. RESTRICTIONS

1. Restrictions. The Owner:

- (a) Shall not use or allow the use of the Real Estate for residential purposes, including, but not limited to, daily child care facilities or educational facilities for children (e.g., daycare centers or K-12 schools).
- (b) Shall not use or allow the use or extraction of groundwater at the Real Estate for any purpose, including, but not limited to: human or animal consumption, gardening, industrial processes, or agriculture, except that groundwater may be extracted in conjunction with environmental investigation and/or remediation activities.
- (c) Shall restore soil disturbed as a result of excavation and construction activities in such a manner that the remaining contaminant concentrations do not present a threat to human health or the environment. This determination shall be made using the Department's current risk based guidance. Upon the Department's request, the Owner shall provide the Department written evidence (including sampling data) showing the excavated and restored area, and any other area affected by the excavation, does not represent such a threat. Contaminated soils that are excavated must be managed in accordance with all applicable federal and state laws, and disposal of such soils must also be done in accordance with all applicable federal and state laws.
- (d) Shall not construct or allow occupancy of a dwelling or work space on the Real Estate unless a vapor mitigation system is installed, operated, and maintained within the dwelling or work space. IDEM may waive this restriction in writing if the Owner has provided data and analysis demonstrating to IDEM's satisfaction that there is no unacceptable risk to human health via the vapor intrusion exposure pathway.
- (e) Shall operate and maintain the vapor mitigation system depicted in Exhibit D so as to protect its functional integrity in accordance with the system's *Operation, Maintenance and Monitoring Plan* which is included as Exhibit E. Owner shall notify the Department in writing at least fifteen (15) days in advance of conducting any construction or excavation work that may impact an engineered control, unless an emergency exists. Owner shall ensure that the integrity of the vapor mitigation system is restored immediately after disturbance by any construction or excavation work. Upon IDEM's request, the Owner shall provide written evidence showing the engineered control has been restored to its complete integrity.

II. GENERAL PROVISIONS

2. Restrictions to Run with the Land. The restrictions and other requirements described in this Covenant shall run with the land and be binding upon, and inure to the benefit of the Owner of the Real Estate and the Owner's successors, assignees, heirs and lessees and their authorized agents, employees, contractors, representatives, agents, lessees, licensees, invitees, guests, or persons acting under their direction or control (hereinafter "Related Parties") and shall continue as a servitude running in perpetuity with the Real Estate. No transfer, mortgage, lease, license, easement, or other conveyance of any interest in or right to occupancy in all or any part of the Real Estate by any person shall affect the restrictions set forth herein. This Covenant is imposed upon the entire Real Estate unless expressly stated as applicable only to a specific portion thereof.
3. Binding upon Future Owners. By taking title to an interest in or occupancy of the Real Estate, any subsequent Owner or Related Party agrees to comply with all of the restrictions set forth in paragraph 1 above and with all other terms of this Covenant.
4. Access for Department. The Owner shall grant to the Department and its designated representatives the right to enter upon the Real Estate at reasonable times for the purpose of monitoring compliance with this Covenant and ensuring its protectiveness; this right includes the right to take samples and inspect records.
5. Written Notice of the Presence of Contamination. Owner agrees to include in any instrument conveying any interest in any portion of the Real Estate, including but not limited to deeds, leases and subleases (excluding mortgages, liens, similar financing interests, and other non-possessory encumbrances), the following notice provision (with blanks to be filled in):

NOTICE: THE INTEREST CONVEYED HEREBY IS SUBJECT TO AN ENVIRONMENTAL RESTRICTIVE COVENANT, DATED _____, RECORDED IN THE OFFICE OF THE RECORDER OF MARION COUNTY ON _____, 2015, INSTRUMENT NUMBER (or other identifying reference) _____ IN FAVOR OF AND ENFORCEABLE BY THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT.

6. Notice to Department of the Conveyance of Property. Owner agrees to provide notice to the Department of any conveyance (voluntary or involuntary) of any ownership interest in the Real Estate (excluding mortgages, liens, similar financing interests, and other non-possessory encumbrances). Owner must provide the Department with the notice within thirty (30) days of the conveyance and: (a) include a certified copy of the instrument conveying any interest in any portion of the Real Estate; (b) if it has been recorded, its recording reference; and (c) the name and business address of the transferee.
7. Indiana Law. This Covenant shall be governed by, and shall be construed and enforced according to, the laws of the State of Indiana.

III. ENFORCEMENT

8. **Enforcement.** Pursuant to IC 13-14-2-6 and other applicable law, the Department may proceed in court by appropriate action to enforce this Covenant. Damages alone are insufficient to compensate IDEM if any owner of the Real Estate or its Related Parties breach this Covenant or otherwise default hereunder. As a result, if any owner of the Real Estate, or any owner's Related Parties, breach this Covenant or otherwise default hereunder, IDEM shall have the right to request specific performance and/or immediate injunctive relief to enforce this Covenant in addition to any other remedies it may have at law or at equity. Owner agrees that the provisions of this Covenant are enforceable and agrees not to challenge the provisions or the appropriate court's jurisdiction.

IV. TERM, MODIFICATION AND TERMINATION

9. **Term.** The restrictions shall apply until the Department determines that the contaminants of concern no longer present an unacceptable risk to the public health, safety, or welfare, or to the environment.
10. **Modification and Termination.** This Covenant shall not be amended, modified, or terminated without the Department's prior written approval. Within thirty (30) days of executing an amendment, modification, or termination of the Covenant, Owner shall record such amendment, modification, or termination with the Office of the Recorder of Marion County and within thirty (30) days after recording, provide a true copy of the recorded amendment, modification, or termination to the Department.

V. MISCELLANEOUS

11. **Waiver.** No failure on the part of the Department at any time to require performance by any person of any term of this Covenant shall be taken or held to be a waiver of such term or in any way affect the Department's right to enforce such term, and no waiver on the part of the Department of any term hereof shall be taken or held to be a waiver of any other term hereof or the breach thereof.
12. **Conflict of and Compliance with Laws.** If any provision of this Covenant is also the subject of any law or regulation established by any federal, state, or local government, the strictest standard or requirement shall apply. Compliance with this Covenant does not relieve the Owner of its obligation to comply with any other applicable laws.
13. **Change in Law, Policy or Regulation.** In no event shall this Covenant be rendered unenforceable if Indiana's laws, regulations, guidance, or remediation policies (including those concerning environmental restrictive covenants, or institutional or engineering controls) change as to form or content. All statutory references include any successor provisions.

14. **Notices.** Any notice, demand, request, consent, approval or communication that either party desires or is required to give to the other pursuant to this Covenant shall be in writing and shall either be served personally or sent by first class mail, postage prepaid, addressed as follows:

To Owner:

Purtee Property and Management, LLC
6295 East 122nd Street
Carmel, IN 46033

To Department:

IDEM, Office of Land Quality
100 N. Senate Avenue
IGCN 1101
Indianapolis, IN 46204-2251
Attn: Section Chief, State Cleanup

An Owner may change its address or the individual to whose attention a notice is to be sent by giving written notice via certified mail.

15. **Severability.** If any portion of this Covenant or other term set forth herein is determined by a court of competent jurisdiction to be invalid for any reason, the surviving portions or terms of this Covenant shall remain in full force and effect as if such portion found invalid had not been included herein.
16. **Authority to Execute and Record.** The undersigned person executing this Covenant represents that he or she is the current fee Owner of the Real Estate or is the authorized representative of the Owner, and further represents and certifies that he or she is duly authorized and fully empowered to execute and record, or have recorded, this Covenant.

Owner hereby attests to the accuracy of the statements in this document and all attachments.

IN WITNESS WHEREOF, Purtee Property and Management, LLC, the said Owner of the Real Estate described above has caused this Environmental Restrictive Covenant to be executed on this 6th day of March, 2017.



Purtee Property and Management, LLC

Steve Purtee

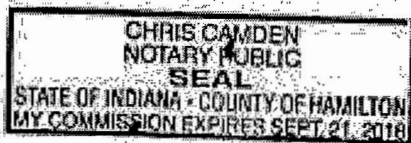
STATE OF INDIANA)

) SS:

COUNTY OF MARION)

Before me, the undersigned, a Notary Public in and for said County and State, personally appeared Seven Artee, the _____ of the Owner, who acknowledged the execution of the foregoing instrument for and on behalf of said entity.

Witness my hand and Notarial Seal this 6 day of March, 2017



Chris Camden Notary Public

Residing in Hamilton County, IN

My Commission Expires:

Sept 21, 2018

This instrument prepared by:

Daniel P. McInerney
Bose McKinney & Evans LLP
111 Monument Circle, Suite 2700
Indianapolis, Indiana 46204

I affirm, under the penalties for perjury, that I have taken reasonable care to redact each Social Security number in this document, unless required by law:

Daniel P. McInerney
Bose McKinney & Evans LLP
111 Monument Circle, Suite 2700
Indianapolis, Indiana 46204

EXHIBIT A
LEGAL DESCRIPTION OF REAL ESTATE

2

WARRANTY DEED

This Indenture Witnesseth, That Steven and Courtney Purtee (Grantor),

Conveys and Warrants to Purtee Property and Management, LLC, an Indiana Limited Liability (Grantee) of Hamilton County, in the State of Indiana, for the sum of Ten & 00/100 Dollars (\$10.00) and other valuable consideration, the receipt of which is hereby acknowledged, the following described real estate in Marion County, in the State of Indiana ("Real Estate"), in fee simple absolute:

Lots #640 and 641 and 642 in Montrose Addition, an Addition to the City of Indianapolis, recorded in Plat Book 14, pages 127 and 128, in the Office of the Recorder of Marion County, Indiana.

The address of such real estate is commonly know as:

2300 to 2306 East 44th Street, Indianapolis, Indiana 46205

Subject to all installments of Real Estate Taxes due now and payable thereafter.

Subject to the any and all easements, agreement, and restrictions of record.

Tax bills should be sent to Grantee at the address listed below:

Purtee Property and Management, LLC
6295 E. 122nd Street
Carmel, Indiana 46033

29 IN WITNESS WHEREOF, Grantor has caused this deed to be executed this day of September, 2003.


Steven Purtee


Courtney Purtee

MARTIN & WOLFE
93060 OCT-3-03
FOR TRANSFER

Prepared by
Stanley F. Collesano
Attorney at Law
10401 N. Meridian St. Suite 300
Indianapolis, IN 46260.

Inst # 2003-0210648
10/02/03 GRANTOR MARION COUNTY RECORDER LHM 16.00 PAGES: 2

STATE OF INDIANA
COUNTY OF MARION

)
)SS
)

Before me, a Notary Public in and for said County and State, personally appeared Steven and Courtney, who acknowledged the execution of the foregoing Warranty Deed.

WITNESS my hand and Notary seal, this 29 day of September, 2003.

[SEAL]

My commission expires:

07-13-2009

County of Residence:

Hamilton

Theresa K. Murphy
Notary Public

Theresa K. Murphy
Print Name

EXHIBIT B
MAP OF REAL ESTATE

Exhibit B

**2300 – 2306 East 44th Street
Marion County, Indianapolis, Indiana 46205**

X: 199836
Y: 1671642

X: 199956
Y: 1671642

N

X: 199836
Y: 1671505

X: 199956
Y: 1671505

Indiana East Nad 83 (feet)
Source: *Marion County GIS* (<http://maps.indy.gov/MapIndy/>)

50ft

100ft

EXHIBIT C
CONTAMINANTS OF CONCERN REMAINING ON-SITE

Exhibit C

**2300 – 2306 East 44th Street
Marion County, Indianapolis, Indiana 46205**

Contaminants of Concern:

Arsenic
Nickel
Cadmium
Dichloroethylene, 1,2-cis-
Tetrachloroethylene
Trichloroethylene
Vinyl Chloride

EXHIBIT D

VAPOR MITIGATION SYSTEM

- Extraction Point
- Depressurization Fans
- 4-inch Conveyance Lines (System #2)
- 3-inch Conveyance Lines (System #1)

2300 - Tenant Space Number

2300

2302 - 2304

EP 2

2306

EP 1

EP 4

EP 6

EP 3

Former Purtee Plating
2300 to 2306 East 44th Street
Indianapolis, Indiana

Drawn by: AD
8/25/2015
1"=20'

Exhibit D
Vapor Mitigation System

EXHIBIT E

OPERATION, MAINTENANCE AND MONITORING PLAN

VAPOR INTRUSION, INSPECTION, MONITORING, AND MAINTENANCE WORK PLAN

**Former Purtee Plating
2300 to 2306 East 44th Street, Indianapolis, IN
IDEM Project Numbers 2006-05-3604 and 2006-06-154**

September 15, 2015

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Figure 1. Site Vicinity Map

Figure 2. SSDS Layout

Figure 3. SSDS Verification Sampling Locations and Results

TABLES

Table 1. OMM Schedule

ATTACHMENTS

Attachment A. SSDS Diagnostic Testing Results

Attachment B. SSDS Commissioning Results

Attachment C. SSDS Inspection Form

1.0 INTRODUCTION

Burns Environmental Engineering, Inc. (BEE) has prepared this *Vapor Intrusion, Inspection, Monitoring, and Maintenance Plan* to outline the procedures for inspection, maintenance, and monitoring of the vapor intrusion (VI) mitigation systems installed at the Former Purtee Plating Facility at 2300 to 2306 East 44th Street, Indianapolis, Indiana (the Site). A Site Vicinity map is provided as Figure 1.

A screening level vapor VI investigation was performed in the Site building in August of 2013. The investigation, which is documented in BEE's *Vapor Intrusion Screening Report*, dated September 3, 2013, included paired sub-slab/indoor air sampling in each of the building's three tenant spaces. Results from the sampling indicated the presence of tetrachloroethylene (PCE; 15,000 – 20,300 $\mu\text{g m}^{-3}$), trichloroethylene (TCE; 287 – 3,630 $\mu\text{g m}^{-3}$) and chloroform (11.7 – 55.2 $\mu\text{g m}^{-3}$) in sub-slab samples at concentrations exceeding commercial/industrial screening levels outlined in the Indiana Department of Environmental Management's (IDEM) Remediation Closure *Guide* (RCG). It is of note, however, that there were no constituents identified in indoor air exceeding commercial/industrial indoor air screening levels.

The IDEM published *Draft Vapor Remedy Selection and Implementation* guidance in February of 2014, which offers general criteria for evaluation of paired indoor air/sub-slab sampling data. Comparison of Site data to Table 1 of the guidance indicates both PCE and TCE were identified in sub-slab soil gas at concentrations in excess of two times their respective commercial/industrial screening levels. Therefore, both of these constituents fall within Scenario 3 as identified in Table 1 of the guidance. Scenario 3 assigns a significant potential for future vapor intrusion into the Site building. The draft guidance recommends either the implementation of vapor intrusion mitigation strategies or long-term paired indoor air / sub-slab sampling. Given the magnitude of the exceedances of PCE and TCE observed, active sub-slab depressurization systems (SSDS) were installed within the building.

2.0 SITE DESCRIPTION AND SYSTEM DESIGN

2.1 Site Description

The Site is located at 2300 to 2306 East 44th Street, Indianapolis, Indiana, in Washington Township of Marion County. The property was acquired by PPM in 2003, and consists of a rectangular-shaped parcel (0.374-acres) with one single-story building currently divided into three tenant spaces. The building, approximately 100 feet by 60 feet, is situated in the center of the property, and consists of brick and mason block construction on a concrete slab. The building encompasses approximately 65% of the total footprint of the property. The remaining ground cover consists of asphalt or concrete pavement to the east, south and west of the building (~20% ground cover), and gravel to the north (~15% ground cover). The Site and surrounding areas are serviced by public utilities, including municipal water and sewer.

2.2 Vapor Intrusion Mitigation System Design and Installation

2.2.1 Diagnostic Testing

Design testing for the SSDS was conducted by Vapor Protection Services on March 16, 2015 under the supervision of BEE personnel. The testing included the installation of three temporary extraction points and 11 pressure field test points installed throughout the footprint of the building's slab. Each extraction point consisted of a 4-inch diameter holes drilled through the building's slab, with under-slab material excavated to create a void space approximately 8-inches deep and 6-inches in diameter. Pressure field test points consisted of 0.5-inch diameter holes drilled through the slab and approximately 3-inches into the underlying sub-slab material. A vacuum was then created at each extraction point using a portable two-stage vacuum blower in order to produce extraction air flows ranging between 50 and 68 cubic feet per minute (CFM). Vacuum measurements were then obtained from surrounding test points in order to determine the resulting negative pressure field beneath the building slab. A summary of test data is provided as Attachment A.

2.2.2 Installation of Sub-Slab Depressurization Systems

Installation of the sub-slab depressurization system was conducted by Vapor Protection Services, a certified Radon Mitigator, between June 24 and 29, 2015 under the supervision of BEE personnel. The system, which is shown in Figure 2, was designed based on diagnostic testing and professional judgement to induce a negative pressure field of at least 4 pascals throughout the area beneath the building's slab. The system consists of a total of six vapor extraction points. Each extraction point consists of a 4-inch diameter hole drilled through the building's slab, with under-slab material excavated to create a void space approximately 8-inches deep and 6-inches in diameter. Extraction points 1 through 4 are plumbed to a common header via 3-inch diameter, schedule 40 PVC pipe. Extraction points 5 and 6 are plumbed to a common header via 4-inch diameter, schedule 40 PVC pipe. Magnehelic pressure gauges are installed at the terminal end of each header in order to easily monitor the vacuum at each of the system's two vapor effluent stacks. Flow balancing between each of the system's extraction points can be performed as needed by ball valves installed in-line. Depressurization fans are installed in-line at each of the two SSDS vapor effluent stacks.

2.3.3 System Commissioning and Verification Sampling

System commissioning and verification sampling was performed by BEE on July 28 and 29, 2015. System commissioning was performed in general accordance with the New Jersey Department of Environmental Protection (NJDEP) *Vapor Intrusion Technical Guidance* (March 2013). System commissioning diagnostic measurements included:

Diagnostic Measurement	Location	Instrumentation
Sub-slab vacuum measurements	10 temporary test ports located throughout the building footprint	Dwyer 475-000-FM Digital Manometer
Air velocity measurements	Riser stack at each extraction point	Dwyer 471B Digital Thermo-Anemometer
Vacuum measurements	Each vapor effluent stack	Dedicated Dwyer Magnehelic Gauges

A summary of system commissioning measurements are provided as Attachment B. Sub-slab vacuum measurements obtained from each of the 10 test points were found to be in excess of 4 pascals, indicating the negative pressure field induced beneath the building meets design requirements.

A pre-sampling walk through of the Site building was performed by BEE prior to conducting verification sampling. Potential indoor sources of volatile organic compounds (VOCs) identified during the walk through were dominated by spray cans containing various degreasing and cleaning agents and paint cans. Inspection of each of these potential sources, and review of the Material Safety Data Sheets, indicated VOCs potentially sourced from within the building are dominated by petroleum-related mineral spirits, petroleum naphtha, and aliphatic petroleum distillates. The walk through did not reveal any obvious presence of chlorinated solvents, or other chlorinated compounds.

Verification indoor air samples were collected between June 28 and June 29 at locations identified in Figure 3 by placing a 6-L Summa canister approximately 3 feet above the floor. The 3 to 5 foot interval was used to be representative of the breathing zone. The samples were collected with 24-hour flow regulators attached to each Summa canister. All connections between the Summa canisters and flow regulators were secured with laboratory-provided threaded connections sealed with Teflon tape. All samples were submitted to EnvisionAir under chain of custody protocols for analysis of VOCs historically identified as contaminants of potential concern (COPCs), or identified in sub-slab samples during BEE's previous vapor intrusion screening investigation, using USEPA Test Method TO-15.

Laboratory analytical results obtained during the indoor air verification testing performed on June 28 and June 29, 2015 are summarized in Figure 3. All constituents identified in sub-slab soil gas during BEE's VI screening level investigation were found to be below both laboratory detection limits and residential vapor intrusion screening levels.

3.0 INSPECTION, MONITORING, AND MAINTENANCE PROCEDURES

This section presents the inspection and monitoring procedures to be conducted at the Site building, the protocols for evaluating and enhancing SSDS effectiveness, and system maintenance. The inspection and monitoring activities were developed based on and will be conducted in accordance with the New Jersey Department of Environmental Protection (NJDEP) *Vapor Intrusion Technical Guidance* (March 2013). Table 1 provides a summary of inspection and monitoring tasks to be conducted and the frequency at which they will occur.

3.1 Inspections and Monitoring

Periodic inspection and monitoring will be conducted during operation of the VI mitigation system to confirm that the Site building's SSDS is operating effectively. Inspection and monitoring of the VI mitigation system will include the following activities.

3.1.1 Building Inspections

Building inspections will be conducted to observe and document the condition of the SSDS and to record changes to the building and surrounding areas that could affect SSDS performance. To the extent feasible, The SSDS Inspection Form provided as Attachment C will be used to document inspections.

Inspections will consist of observing and documenting the condition of VI mitigation system components and any structural changes or modifications to the building or adjacent buildings or structures, and recording the VI mitigation system vacuum gauges and air flow measurements at each extraction point. Measurements previously documented during verification monitoring will be used for comparison during the inspection. Photographs will be taken during the inspection to document any deterioration of materials (e.g., cracks in piping, mounting damage) or other pertinent changes in the condition of the VI mitigation system, the building structure, or other factors that could impact system operation or effectiveness.

3.1.2 Pressure Field Extension Monitoring

Pressure field extension monitoring (PFE) will be conducted at the building per the schedule outlined in Table 1 in order to measure the pressure differential across the building slab while the SSDS is operating. The results from the PFE monitoring will be used to confirm that the negative pressure field extends to points far removed from the sump locations.

Three permanent subslab monitoring ports will be installed in the building slab at the approximate locations shown in Figure 2. The subslab monitoring ports will flush-mounted to the building slab and have tamper-resistant caps. The subslab monitoring ports will be used for PFE monitoring to determine whether a negative subslab pressure exists. A negative pressure of 4 pascals or more at each of the subslab

monitoring ports is considered to be acceptable. The tamper-resistant caps secures the subslab monitoring port closed between PFE monitoring to maintain the integrity of the depressurization applied by the VI mitigation system.

3.1.3 Air Quality Monitoring

Air quality monitoring will be conducted per the schedule outlined in Table 1. Air samples will be collected at the approximate sampling locations used during previous investigations (Figure 3). Indoor air samples will be collected by placing a 6-L Summa canisters approximately 3 feet above the floor. The 3 to 5 foot interval will be used to be representative of the breathing zone. The samples will be collected with 8-hour flow regulators attached to each Summa canister. All connections between the Summa canisters and flow regulators will be secured with laboratory-provided threaded connections sealed with Teflon tape. Samples will be submitted to an environmental laboratory under chain of custody protocols for analysis of VOCs using USEPA Test Method TO-15.

In the event sampling protocols change in response to updated regulatory standards, the sampling protocols will be amended and submitted to the IDEM for concurrence prior to performing subsequent sampling activities.

3.2 System Re-Evaluation and Enhancement

The results from the air quality, PFE, and/or building inspections will be evaluated to determine whether modifications to the SSDS are necessary. The SSDS will be re-evaluated or modified to enhance the effectiveness, if warranted, based on inspection and monitoring results. The following criteria will be used to determine whether re-evaluation of the SSDS is warranted:

- Inspection results indicate a significant structural change in the building (e.g., remodeling that could introduce additional pathways for vapor intrusion);
- Air quality monitoring results indicate an indoor air inhalation pathways exceeding appropriate screening levels outlined in the IDEM's Remediation Closure Guide, or superseding guidance.
- Results from PFE monitoring indicate induced vacuum below the building slab is less than 4 pascals.

The scope of work to re-evaluate and, if necessary, enhance the SSDS effectiveness will be provided on a case-by-case basis and discussed with the IDEM prior to performing enhancements.

3.3 System Maintenance

The SSDS maintenance will be performed on an as-needed basis and will be based on conditions observed during inspection activities. Components that may require maintenance include the exhaust blowers, pressure gauges, and piping. The exhaust blowers are not amenable to periodic maintenance and are relatively easy to replace. Therefore, the blowers will be operated until excessive noise, vibration, or significantly reduced pressure gauge readings are noted, at which point the blowers will be repaired or replaced. An operational failure of the blower would be indicated by the pressure gauge, which will be checked during inspections.

Pressure gauges are less robust than manometers over continued use and may fail after prolonged use. Additional monitoring port were installed on each vapor effluent stack to monitor SSDS vacuum during annual inspections. VI mitigation system vacuum measurements collected during building inspections will be compared to the VI mitigation system vacuum gauge. A failed pressure gauge will be identified when the pressure gauge is 75 percent of the annually monitored VI mitigation system pressure. If pressure gauge failure is confirmed, a replacement pressure gauge will be installed and tested as necessary.

Replacement and/or repair of cracked or otherwise damaged system piping observed during inspections or identified by the building tenant may be required. Significant modifications to the SSDS piping, if warranted, will be reviewed and approved by a Licensed Professional Engineer in the State of Indiana prior to commencing with the work.




4.0 REPORTING

Results from the SSDS inspections and monitoring at the Building will be documented in an Annual Report. Each Annual Report will contain a brief narrative of the procedures followed for the inspection, monitoring, and maintenance activities; a copy of completed inspection forms; a summary of pressure gauge readings; the results from PFE monitoring; and the results from air quality monitoring events. Each report will document potentially significant changes in conditions or other issues observed during the inspections, present supporting photographs, and recommend follow-up investigations and/or corrective actions, if necessary. The reports will be maintained by the property owner.

FIGURES

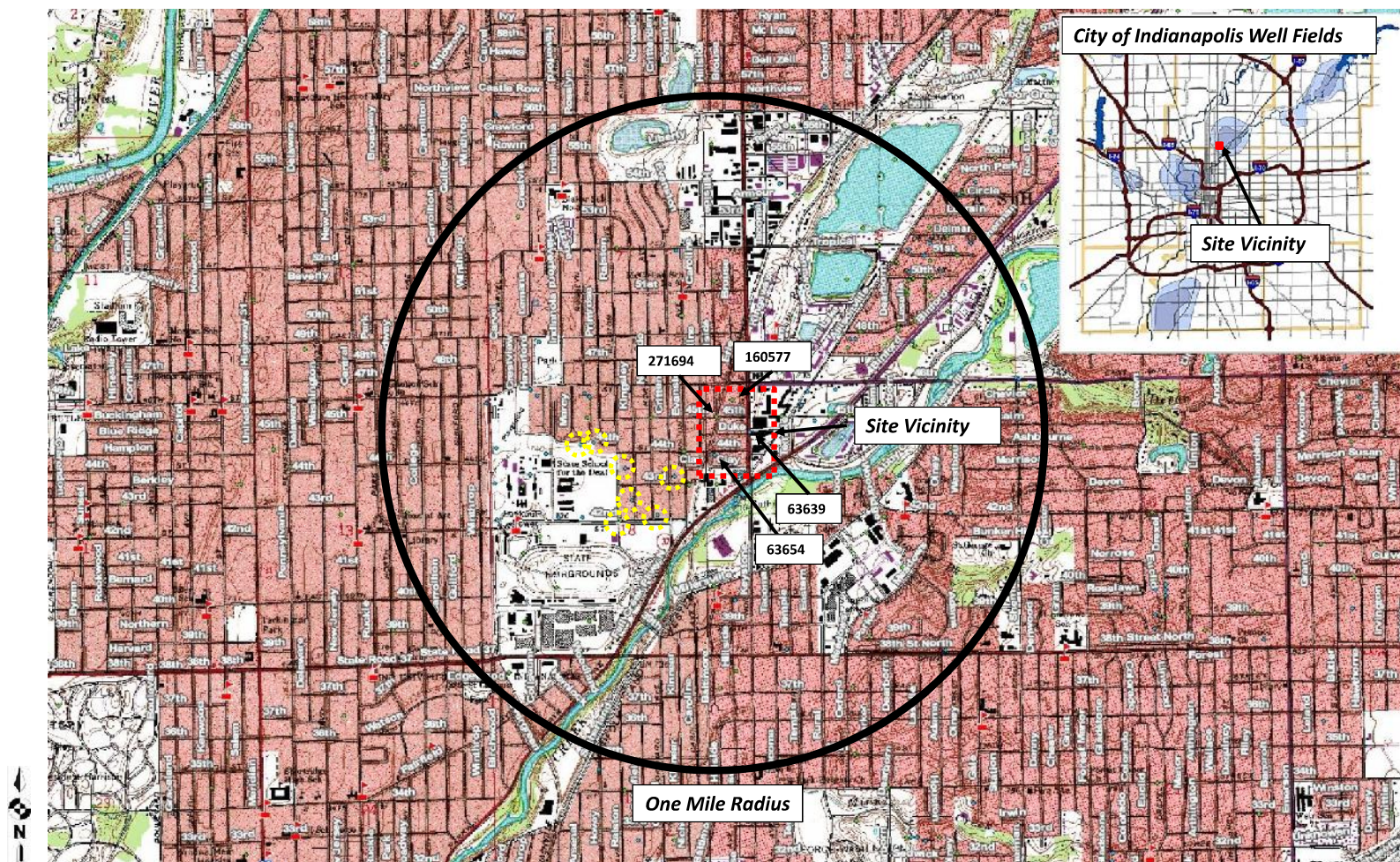
-  - Floodplains
-  - Wetlands
-  - Schools
-  - Hospitals
-  - Daycares
-  - IDNR Well Reference Number

Water Wells (IDNR)

-  - Located
-  - Location Estimated
-  - City of Indianapolis Well

Notes:

- The Site is situated in a mixed commercial, light industrial and residential setting.
- There are no known sensitive populations in the immediate vicinity of the Site.
- Ecological receptors in the vicinity of the Site include Fall Creek and associated wetlands. There are no known impacts to these receptors.



Source: Indiana Geological Survey Online Map, <http://inmap.indiana.edu/index.html>



Former Purtee Plating
2300 to 2306 East 44th Street
Indianapolis, Indiana

Drawn by: AD
12/15/2014
1"=1750'

Figure 1
Site Vicinity Map

(-0.000) - Vacuum (Pascals) System Commissioning Results

▲ VI System Commissioning Sub-Slab Test Points

● Extraction Point

● Vapor Effluent Stack

— 4-inch Conveyance Lines (System #2)

— 3-inch Conveyance Lines (System #1)

2300 - Tenant Space Number

■ Permanent PFE Measurement Point



Datum: 7/29/2015







Former Purtee Plating
2300 to 2306 East 44th Street
Indianapolis, Indiana

Drawn by: AD

8/25/2015

1"=20'

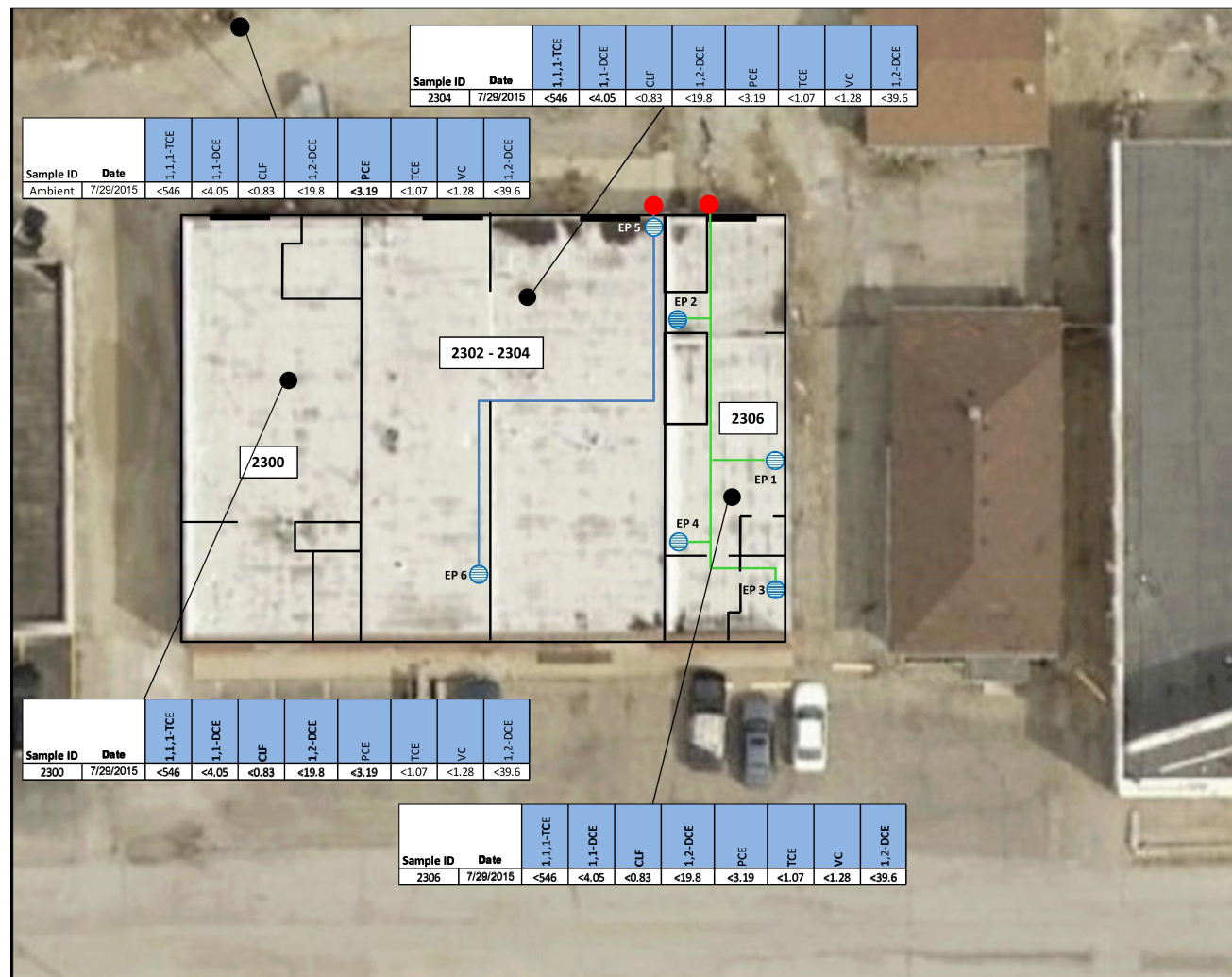
Figure 2
SSDS Layout

-  - Extraction Point
-  - Depressurization Fans
-  - 4-inch Conveyance Lines (System #2)
-  - 3-inch Conveyance Lines (System #1)
- 2300

 - Tennant Space Number

Screening Levels - Indoor Air		
	Residential	Industrial / Commercial
1,1,1-TCE Trichloroethane, 1,1,1-	5200	22000
1,1-DCE Dichloroethane, 1,1-	15	77
CLF Chloroform	1.1	5.3
1,2-DCE Dichloroethylene, 1,2-cis-		
PCE Tetrachloroethylene	21	180
TCE Trichloroethylene	2.1	8.8
VC Vinyl Chloride	1.6	28
1,2-DCE Dichloroethylene, 1,2-trans-	63	260

All data in $\mu\text{g m}^{-3}$



Former Purtee Plating
2300 to 2306 East 44th Street
Indianapolis, Indiana

Drawn by: AD
8/25/2015
1"=20'



Figure 3
SSD Verification Sampling
Location and Results

TABLES

Table 1
OMM Schedule
Former Purtee Plating
2300 to 2306 East 44th Street, Indianapolis, IN

Year	Inspection/Monitoring Frequency	OMM Inspections	Monitoirng Sampling
1	Semi-Annual	Building Inspections, Pressure Field Extension Monitoring, Vacuum Measurements at Vapor Effluent Stacks, Air Flow Rates and Extraction Points	Air Quality Monitroing
2 and beyond	Annual	Building Inspections, Pressure Field Extension Monitoring, Vacuum Measurements at Vapor Effluent Stacks, Air Flow Rates and Extraction Points	Air Quality Monitoring

ATTACHMENT A

-  - VI Mitigation Diagnostic Testing Points
-  - VI Mitigation Diagnostic Extraction Points
- 2300

 - Tenant Space Number



Former Purtee Plating
2300 to 2306 East 44th Street
Indianapolis, Indiana

Drawn by: AD
8/18/2015
1"=20'

Attachment A
Vapor Intrusion Mitigation
Diagnostic Test Results

3/16/2015

[illegible]

ATTACHMENT B

SSD System Commissioning Results
2300 - 2306 East 44th Street, Indianapolis, Indiana
July 29, 2015

Header Vacuum (inches of water)	Extraction Point	PVC Diameter (inches)	Date	Velocity (feet per minute)
1.2	EP-1	3"	7/29/15	220
	EP-2	3"	7/29/15	400
	EP-3	3"	7/29/15	900
	EP-4	3"	7/29/15	275
2.1	EP-5	4"	7/29/15	240
	EP-6	4"	7/29/15	470

Sample ID	Tenant Space	Date	Pascals
TP-1	2306	7/29/15	-6.836
TP-2	2306	7/29/15	-8.468
TP-3	2306	7/29/15	-6.974
TP-4	2306	7/29/15	-8.219
TP-5	2306	7/29/15	-6.227
TP-6	2304	7/29/15	-12.205
TP-7	2304	7/29/15	-16.688
TP-8	2302	7/29/15	-8.219
TP-9	2302	7/29/15	-5.479
TP-10	2300	7/29/15	-8.219

ATTACHMENT C

Sub-Slab Depressurization System Inspection Form

Date and Time: _____

Location: _____

PART 1 - DOCUMENTATION OF CONDITION OF SYSTEM COMPONENTS

Manometer/Pressure Gauge Readings				
Vapor Effluent Stack 1	Vapor Effluent Stack 2	SSMP-1	SSMP-2	SSMP-3

Air Flor Readings					
EP-1	EP-2	EP-3	EP-4	EP-5	EP-6

Exterior Pipe Free of Cracks	Y	N	N/A
Blower Running Appropriately	Y	N	N/A
Manometer in Good Condition	Y	N	N/A
Caulk on Floor Penetrations in Good Condition	Y	N	N/A
Significant Floor Cracks or Penetrations Observed	Y	N	N/A
Sub-Slab Monitoring Ports Cap Secured	Y	N	N/A

PART 2 - DOCUMENTATION OF STRUCTURAL CHANGES

Any Significant Changes to the Building's HVAC System	Y	N	N/A
Any new vents or openings in the roof/walls less than 10' away from the stack	Y	N	N/A
Any new buildings near the mitigated building close enough that stack gasses could contaminate their indoor	Y	N	N/A
Have there been any significant earthquake events	Y	N	N/A

PART 3 - OTHER OBSERVATIONS/COMMENTS

Comments: _____
